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09/674,347	10/30/2000	Jacob Cornelis Van Der Wal	PTT-106(4025	6895
7265	7590	06/26/2007	EXAMINER	
MICHAELSON & ASSOCIATES			NG, CHRISTINE Y	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/674,347

Applicant(s)

VAN DER WAL ET AL.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 15 is objected to because of the following informalities:

In line 2, "claim 21" should be changed to --claim 14--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No, 6,122,54 to Spaur et al in view of U.S. Patent No. 6,819,672 to Corneliussen.

Referring to claim 14, Spaur et al disclose in Figure 1 a system in a packet based telecommunication network comprising a measuring device (link controller/monitor 50) for measuring a time period (inter-packet time) during which a predefined number (2) of packets that belong to a common packet connection are received or transmitted during an entire session through the connection so as to define a measured time period, wherein the predefined number (2) is less than a total number of packets carried over the connection during the entire session (2 packets is less than all the packets of the session). The link controller/monitor 50 measures the inter-packet receive time, which is the time of reception between two successive packets. Refer to Column 1, lines 31-

53; Column 7, lines 51-52; Column 8, lines 32-33; and Column 9, line 53 to Column 10, line 12.

Spaur et al do not disclose a billing system for formulating a charge for use of the connection in response to the measured time period.

Corneliussen discloses that the charging system comprises calculating a ratio ( $m/T_{tot}$ ) of the number ( $m$ ) of packets per said time period ( $T_{tot}$ ) so as to yield a calculation result ( $m/T_{tot}$ ) and supplying the calculation result ( $m/T_{tot}$ ) to a billing system (Figure 1, charging manager). Refer to Column 1, lines 43-46; Column 3, lines 27-36 and lines 48-60; and Column 4, lines 15-24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a billing system for formulating a charge for use of the connection in response to the measured time period. One would be motivated to do so in order to in order to utilize the interarrival time interval to charge the user; a user must be charged more if the user sends a certain number of packets in a shorter time period since it is a faster connection. Furthermore, Spaur et al disclose that the network channel or carrier providers "can supply cost estimates based on factors such as the extent or volume of the information transfer" (Column 4, lines 44-49). Also, costs are defined as "one or more values related to costs in connection with accomplishing the particular information transfer" (Column 8, lines 36-37). Inter-packet time can be used to determine the cost of a connection, since inter-packet time is an information transfer. Spaur et al also disclose that network parameters include channel setup cost and channel cost per

packet, wherein the channel cost per packet is a function of many factors including the elapsed time for sending the packet. Refer to Column 7, line 61 to Column 8, line 3.

Referring to claim 15, Spaur et al disclose in Figure 1 that the system further comprises a calculation device (link controller/monitor 50), responsive to said measuring device, for calculating a ratio reflective of the number (2) of packets per said time period (inter-packet time) so as to yield a calculation result.

Spaur et al do not disclose supplying the calculation result to the billing system. Refer to the rejection of claim 14.

Referring to claim 18, Spaur et al do not disclose that the system further comprises an aggregation device for aggregating the calculation result so as to form an aggregated result and passing the aggregated result to the billing system.

Corneliussen discloses an aggregation device (Figure 7, "current volume and time" block) for aggregating the calculation result ( $m/T_{tot}$ ) and passing on the aggregated result ( $m/T_{tot}$ ) to the billing system (Figure 1, charging manager). "The value of the second timer ( $T_{tot}$ ) is provided when the metering equipments gets a request for the current duration for the connection" (Column 3, lines 45-47). The "current volume and time" block reports the aggregated (current)  $m/T_{tot}$  value to the charging meter. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the system further comprises an aggregation device for aggregating the calculation result so as to form an aggregated result and passing the aggregated result to the billing system. One would be motivated

to do so in order to provided an updated calculation result to the billing system so the user charge can be based on a current record of resource usage.

4. Claims 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No, 6,122,54 to Spaur et al in view of U.S. Patent No. 6,819,672 to Corneliussen, and in further view of U.S. Patent No. 6,338,046 to Saari et al.

Referring to claims 16 and 17, Spaur et al do not disclose system packets which comprise an indication of the capacity or priority requested by the user (claim 9) and assigned by the telecommunication system (claim 10), the system further comprising a first detection device (claim 9) and a second detection device (claim 10), for reading out the indication out from the system packets and transferring the indication to the billing system.

Saari et al disclose in Figure 2 system packets (billing cell 31) which comprise an indication (connection information 38) of the capacity or priority requested by the user or assigned by the telecommunication system, characterized by a detection device (node 24) for reading out the indication (connection information 38) out of the system packets (billing cell 31) and transferring that indication to the billing system (access network billing system; Figure 3, Element 40). The connection information 38 includes a connection type field 31 that specifies service parameters such as maximum peak rate, acceptable cell loss ratio, the service class used (CBR, VBR, UBR or ABR) or other ATM traffic parameters. Refer to Column 5, line 60 to Column 6, line 2. A node 24 receives the billing cell 31, detects the connection information 38 and then copies the

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connection information 38 from the billing cell 31 to the billing unit 34. The billing unit 34 then transfers the charging information to a common billing system (Figure 3, Element 40). Refer to Column 5, lines 16-27 and Column 6, lines 26-28. The connection information 38 in billing cell 31 describes the general level of service expected (assigned by the telecommunication system, claim 10) or required (requested by the user, claim 9) by a network user when using a particular connection. Refer to Column 5, lines 56-60. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include system packets which comprise an indication of the capacity or priority requested by the user (claim 9) and assigned by the telecommunication system (claim 10), the system further comprising a first detection device (claim 9) and a second detection device (claim 10), for reading out the indication out from the system packets and transferring the indication to the billing system; the motivation being that this allows the user or the telecommunication system to assign certain traffic parameters to the connection, depending on the type of traffic being transmitted, and for different traffic parameters to be charged differently.

Referring to claims 19 and 20, Spaur et al do not disclose an aggregation device for aggregating the capacity or priority indications provided by the first detection device (claim 9) and a second detection device (claim 10) so as to form aggregated indications and passing on the aggregated indications to the billing system.

Saari et al disclose in Figure 3 an aggregation device (billing units 34a-34d) along a path of nodes 24a-24d from a source 26a to a destination 26b for aggregating the capacity or priority indications (connection information; Figure 2, Element 38) and

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passing on the aggregated indications to the billing system (node 40). A first billing unit 34a generates charging information using the billing cell information it received at a first node 24a and a charging strategy. The first billing unit 34a then passes the updated billing cell to a second billing unit 34b which then generates charging information based on the billing cell contents and a different charging strategy. This is repeated for billing units 34c and 34d. "After acquiring the relevant billing information from each of the billing units 34a-34d associated with each of the nodes 24a-24d defining the connections between the users 26a and 26b, the network billing system 40 computes the total cost for transmitting the data between source and destination locations 26a, 26b" (Column 7, lines 19-26). Refer to Column 6, line 49 to Column 7, line 26.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include an aggregation device for aggregating the capacity or priority indications provided by the first detection device (claim 9) and a second detection device (claim 10) so as to form aggregated indications and passing on the aggregated indications to the billing system; the motivation being that this allows for charging a connection that spans over a series of nodes that operate under different charging strategies. Charging information can be accumulated from one node to the next node to allow for accurate billing of the full connection.

5. Claims 21, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,122,54 to Spaur et al in view of U.S. Patent No. 6,819,672 to Corneliussen, and in view further of U.S. Patent No. 5,923,740 to Ito et al.

Spaur et al do not disclose that the packet network is an asynchronous transfer



mode (ATM) network and the packets are ATM cells.

Ito et al discloses in Figure 1 show an ATM switching billing system. Each ATM terminator 2 and 3 includes a cell counter 20 to count the number of passed cells for charging and passes the information to a billing data collector 5 and a charging center 6 for billing. Refer to Column 2, lines 42-67. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include that the packet network is an asynchronous transfer mode (ATM) network and the packets are ATM cells. One would have been motivated to do so in order to incorporate a charging method in an ATM system.

Referring to claim 22, refer to the rejection of claim 15.

Referring to claim 25, refer to the rejection of claim 18.

6. Claims 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No, 6,122,54 to Spaur et al in view of U.S. Patent No. 6,819,672 to Corneliusen in view of U.S. Patent No. 5,923,740 to Ito et al, and in further view of U.S. Patent No. 6,338,046 to Saari et al.

Referring to claims 23 and 24, refer to rejection of claims 16 and 17.

Referring to claims 26 and 27, refer to rejection of claims 19 and 20.

### ***Response to Arguments***

7. Applicant's arguments filed March 29, 2007 have been fully considered but they are not persuasive.

Referring to the argument that Spaur et al and Corneliusen cannot be combined (page 10, line 8 to page 26, line 11): Corneliusen discloses that the charge is based

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on the total time of the connection and not any intermediate time. However, Corneliussen discloses that the charging system comprises calculating a ratio ( $m/T_{tot}$ ) of the number ( $m$ ) of packets per said time period ( $T_{tot}$ ) so as to yield a calculation result ( $m/T_{tot}$ ) and supplying the calculation result ( $m/T_{tot}$ ) to a billing system (Figure 1, charging manager). Refer to Column 1, lines 43-46; Column 3, lines 27-36 and lines 48-60; and Column 4, lines 15-24. The use of the ratio ( $m/T_{tot}$ ) in determining the charge for the system is motivation to combine Corneliussen with Spaur et al. Spaur et al discloses calculating the inter-packet receive time, which is the time of reception between two successive packets. Although the inter-packet receive time does not have exactly the same meaning as the ( $m/T_{tot}$ ) ratio defined by Corneliussen, it is similar:  $m = 2$ , and  $T_{tot}$  is the time to transmit the two packets. Furthermore, Spaur et al discloses costs associated with packet transfers. Spaur et al disclose that the network channel or carrier providers "can supply cost estimates based on factors such as the extent or volume of the information transfer" (Column 4, lines 44-49). Also, costs are defined as "one or more values related to costs in connection with accomplishing the particular information transfer" (Column 8, lines 36-37). Inter-packet time can be used to determine the cost of a connection, since inter-packet time is an information transfer. Spaur et al also disclose that network parameters include channel setup cost and channel cost per packet, wherein the channel cost per packet is a function of many factors including the elapsed time for sending the packet. Refer to Column 7, line 61 to Column 8, line 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a billing system for formulating a

charge for use of the connection in response to the measured time period. One would be motivated to do so in order to in order to utilize the interarrival time interval to charge the user; a user must be charged more if the user sends a certain number of packets in a shorter time period since it is a faster connection.

Referring to the argument that Spaur et al and Saari et al cannot be combined (page 26, line 12 to page 28, line 14): Saari et al disclose in Figure 2 system packets (billing cell 31) which comprise an indication (connection information 38) of the capacity or priority requested by the user or assigned by the telecommunication system, characterized by a detection device (node 24) for reading out the indication (connection information 38) out of the system packets (billing cell 31) and transferring that indication to the billing system (access network billing system; Figure 3, Element 40). Therefore, Saari et al disclose a billing system, which is analogous art to the billing system of Corneliussen and the costs mentioned in Spaur et al.


### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng   
June 13, 2007



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